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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CEHIC, KENAN	

ART UNIT	PAPER NUMBER
2416	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,185	HAUCK ET AL.	
	Examiner	Art Unit	
	KENAN CEHIC	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,18-23,26,27 and 30-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,18-23,26,27 and 30-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claim 1, 18, 20, 31, 38, 40, 43, 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck et al. (US 6,356,558) in view of Duckwall (US 5,495,481)

For claim 1, Hauck discloses A method (see fig 3, 4) for administering a serial bus (see fig 2), the bus facilitating communication between node devices connected to the bus and communicating over the bus (see fig 1; Node, serial bus; fig 5) in the form of packetized communication (see fig 5; packet) between said node devices (see fig 1; node, serial bus), wherein a first type of packet

comprises asynchronous packets characterized by the absence of a requirement that ack packet be sent in response to transmission of a packet of the first type (see col 2 lines 1-

20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200), wherein a second type of packet comprises asynchronous packets (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged"), the method comprising:

if there is a packet of the second type to be sent (see fig 4; 156, YES; and fig 5; 210-214), then concatenating the packet of the second type (see fig 4; 160 and fig 5; 210-214) to a plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200) and sending the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) followed by the concatenated packet of the second type (see fig 4; 160 and fig 5; 210-214); and

if there is no packet of the second type (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged") to be sent (see fig 3; 122, 126, YES and fig 4; 162 YES), then concatenating a token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token") to the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) and sending the plurality of

packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) followed by the concatenated token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token").

For claim 18, Hauck discloses A method (see fig 3, 4) for administering a serial bus (see fig 2), the bus facilitating communication between node devices connected to the bus and communicating over the bus (see fig 1; Node, serial bus; fig 5) in the form of packetized communication (see fig 5; packet) between said node devices (see fig 1; node, serial bus), wherein a first type of packet

comprises asynchronous packets characterized by the absence of a requirement that an ack packet be sent in response to transmission of a packet of the first

type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200), wherein a second type of packet comprises asynchronous packets (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged"), the method comprising:

receiving (see col 2 line 35j-40 "receiving a packet" and fig 5; 200-202) a packet of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200);

determining that there are no packets of the second type (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged") to be sent (see fig 3; 122, 126, YES and fig 4; 162 YES; and col 20-35 "ackless packet"; case where we have ackless packets to concatenate);

if fly-by concatenation is permitted (see col 4 l. 40 – 65 "If concatenation is allowed...") then concatenating a token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token") to the received packet (see fig 4; 160; 167, 168) and sending the received packet (see fig 4; 160; 167, 168) and the token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token"); and

if fly-by concatenation is not permitted then sending the received packet (see col 4 l. 40-55 "concatenation is not permitted…packet is repeated to all non-receiving ports…arbitration commences"), arbitrating for

the bus (see col 4 l. 40-55 "concatenation is not permitted…packet is repeated to all non-receiving ports…arbitration commences"), and sending a token (see col 4 l. 4—55 "last toke is a EOS token…concatenation is not permitted…packet is repeated…")

For claim 20, Hauck et al. teach wherein arbitrating for control of the bus is performed by PHY hardware (see column 4 lines 1-4, the PHY can manipulate

arbitration line state; see column 3 lines 18-21, the arbitration state machine can be implemented in the PHY).

For claim 31 and similarly claim 43, Hauck discloses A method (see fig 3, 4) for administering a data bus (see fig 2), the bus facilitating communication between node devices communicating over the bus (see fig 1; Node, serial bus; fig 5) using at least a first type type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200) and second type of asynchronous packet (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged"), the first type of packet not requiring that an acknowledgement packet be sent in response to transmission of such first type of packet (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200), the method comprising:

if there is a packet of the second type to be sent (see fig 4; 156, YES; and fig 5; 210-214), then concatenating the packet of the second type (see fig 4; 160 and fig 5; 210-214) to a plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200) and sending the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) followed by the concatenated packet of the second type (see fig 4; 160 and fig 5; 210-214); and

if there is no packet of the second type (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged") to be sent (see fig 3; 122, 126, YES and fig 4; 162 YES), then concatenating a token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token") to the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) and sending the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) followed by the concatenated token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token")

For claim 38 and similarly claim 49, Hauck discloses A method for administering (see fig 3, 4)a data bus (see fig 2), the bus facilitating

communication between node devices communicating over the bus (see fig 1; Node, serial bus; fig 5) using at least a first type type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200) and second type of asynchronous packet (see col 5 line 20-35 "asynchronous

packets" ; col 5 line 25-35 "concatenated packet to be acknowledged"), the first type of packet having no requirement that a response packet be sent in response to transmission thereof (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200), the method comprising:

receiving (see col 2 line 35j-40 "receiving a packet" and fig 5; 200-202) a packet of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200);

determining that there are no packets of the second type (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged") to be sent (see fig 3; 122, 126, YES and fig 4; 162 YES; and col 20-35 "ackless packet"; case where we have ackless packets to concatenate);

if concatenation is permitted (see col 4 l. 40 – 65 "If concatenation is allowed...")

concatenating a token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token") to the received packet (see fig 4; 160; 167, 168) and sending the received packet (see fig 4; 160; 167, 168) and the token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token"); and

if concatenation is not permitted , sending the received packet (see col 4 l. 40-55

"concatenation is not permitted…packet is repeated to all non-receiving ports…arbitration commences"), arbitrating for the bus (see col 4 l. 40-55 "concatenation is not permitted…packet is repeated to all non-receiving ports…arbitration commences"), and sending a token (see col 4 l. 4—55 "last toke is a EOS token…concatenation is not permitted…packet is repeated…")

For claim 40, Hauck et al. teach wherein arbitrating for control of the bus is performed by PHY hardware (see column 4 lines 1-4, the PHY can manipulate arbitration line state; see column 3 lines 18-21, the arbitration state machine can be implemented in the PHY).

For claim 43 and 49, Hauck discloses a node device (see fig 1 and fig 2; node).

Hauck is silent about:

For claim 1, 18 a bogus ack packet.

For claim 31 and 43, a false acknowledgement packet.

For claim 38 and 49, a false response packet.

Duckwall from the same field of endeavor discloses the following features:

For claim 1, 18, Duckwall discloses a bogus ack packet (see col 6 lines 20-50 "According to the P1394 standard, acknowledge packets are eight bit long…data packets are at least sixty-four bits long...count the number of bits...discriminate between data packets and acknowledge packets…equal to eight, the node identifies that an acknowledge packet has been transmitted…")

For claim 31 and 43, Duckwall discloses a false acknowledgement packet (see col 6 lines 20-50 "According to the P1394 standard, acknowledge packets are eight bit long…data

packets are at least sixty-four bits long...count the number of bits...discriminate between data packets and acknowledge packets…equal to eight, the node identifies that an acknowledge packet has been transmitted…").

For claim 38 and 49, Duckwall discloses a false response packet (see col 6 lines 20-50 "According to the P1394 standard, acknowledge packets are eight bit long…data packets are at least sixty-four bits long...count the number of bits...discriminate between data packets and acknowledge packets…equal to eight, the node identifies that an acknowledge packet has been transmitted…").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine / substitute the system of Hauck by using the above recited features, as taught by Duckwall, in order to provide EOS token which will be recognized by node devices explicitly since acknowledgement and data packets are distinctly recognized in 1394 systems (see Duckwall col 6 and Hauck col 2 lines 45-60).

2. Claims 23, 26, 27, 30, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck et al. (US 6,356,558) in view of Duckwall (US 5,495,481) and Henry et al (US 2004/0151153)

For claim 23, Hauck discloses administer (see fig 3, 4) a serial bus (see fig 2), the bus facilitating communication between node devices connected to the bus and communicating over the bus (see fig 1; Node, serial bus; fig 5) in the form of packetized communication (see fig 5; packet) between said node devices (see fig 1; node, serial bus), wherein a first type of packet

comprises asynchronous packets characterized by the absence of a requirement that ack packet be sent in response to transmission of a packet of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200), wherein a second type of packet comprises asynchronous packets (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged"), by performing the acts of:

if there is a packet of the second type to be sent (see fig 4; 156, YES; and fig 5; 210-214), then concatenating the packet of the second type (see fig 4; 160 and fig 5; 210-214) to a plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200) and sending the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) followed by the concatenated packet of the second type (see fig 4; 160 and fig 5; 210-214); and

if there is no packet of the second type (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged") to be sent (see fig 3; 122, 126, YES and fig 4; 162 YES), then concatenating a token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token") to the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous

stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) and sending the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) followed by the concatenated token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token").

For claim 26 and similarly claim 30, Hauck discloses administers (see fig 3, 4) a serial bus (see fig 2), the bus facilitating communication between node devices connected to the bus and communicating over the bus (see fig 1; Node, serial bus; fig 5) in the form of packetized communication (see fig 5; packet) between said node devices (see fig 1; node, serial bus), wherein a first type of packet

comprises asynchronous packets characterized by the absence of a requirement that an ack packet be sent in response to transmission of a packet of the first

type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200), wherein a second type of packet comprises asynchronous packets (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged"), by performing the acts of:

receiving (see col 2 line 35j-40 "receiving a packet" and fig 5; 200-202) a packet of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous

stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200);

determining that there are no packets of the second type (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged") to be sent (see fig 3; 122, 126, YES and fig 4; 162 YES; and col 20-35 "ackless packet"; case where we have ackless packets to concatenate);

if fly-by concatenation is permitted (see col 4 l. 40 – 65 "If concatenation is allowed...") then concatenating a token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token") to the received packet (see fig 4; 160; 167, 168) and sending the received packet (see fig 4; 160; 167, 168) and the token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token"); and

if fly-by concatenation is not permitted then sending the received packet (see col 4 l. 40-55 "concatenation is not permitted…packet is repeated to all non-receiving ports…arbitration commences"), arbitrating for

the bus (see col 4 l. 40-55 "concatenation is not permitted…packet is repeated to all non-receiving ports…arbitration commences"), and sending a token (see col 4 l. 4—55 "last toke is a EOS token…concatenation is not permitted…packet is repeated…")

For claim 27, Hauck discloses administers(see fig 3, 4) a data bus (see fig 2), the bus facilitating

communication between node devices communicating over the bus (see fig 1; Node, serial bus; fig 5) using at least a first type type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200) and second type of asynchronous packet (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged"), the first type of packet not requiring that an acknowledgement packet be sent in response to transmission of such first type of packet (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200), by performing acts of:

if there is a packet of the second type to be sent (see fig 4; 156, YES; and fig 5; 210-214), then concatenating the packet of the second type (see fig 4; 160 and fig 5; 210-214) to a plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet"; fig 5; 200) and sending the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) followed by the concatenated packet of the second type (see fig 4; 160 and fig 5; 210-214); and

if there is no packet of the second type (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged") to be sent (see fig 3; 122, 126,

YES and fig 4; 162 YES), then concatenating a token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token") to the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) and sending the plurality of packets of the first type (see col 2 lines 1-20 "asynchronous ackless… subactions…asynchronous stream…" and col 5 line 20-35 "ackless packet…process continue up the tree…multiple concatenation of asynchronous packets…"; fig 5; 200) followed by the concatenated token (see fig 3; 128; fig 4; 164; col 4 l. 15-35 "insertion of the EOS token"; col 2 lines 45-60 "attaching…token to packet that are the last packet of the subaction"; col 3 line 60-67 "attached immediately after the EOD token..number of idel characters after the EOD token")

For claim 27 and similarly claim 30, Hauck discloses a node device (see fig 1 and fig 2; node) connected to a serial bus (see fig 1 and fig 2; node, serial bus)

Hauck is silent about:

For claim 23, 26, 29, 30, computer readable medium containing / comprising instructions which, when executed by a computer; a bogus ack packet.

Duckwall from the same field of endeavor discloses the following features:

For claim 23, 26, 29, 30, Duckwall discloses a bogus ack packet (see col 6 lines 20-50 "According to the P1394 standard, acknowledge packets are eight bit long…data packets

are at least sixty-four bits long...count the number of bits...discriminate between data packets and acknowledge packets…equal to eight, the node identifies that an acknowledge packet has been transmitted…")

Henry from the same or similar field of endeavor discloses the following features:

For claim 23, 26, 29, 30, computer readable medium containing / comprising instructions which, when executed by a computer (see secton 0044 "software stack")

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine / substitute the system of Hauck by using the above recited features, as taught by Duckwall and Henry, in order to provide EOS token which will be recognized by node devices explicitly since acknowledgement and data packets are distinctly recognized in 1394 systems (see Duckwall col 6 and Hauck col 2 lines 45-60); in order to provide means for implementing methods / protocols via software which can be programmed / reprogrammed without having to change hardware.

3. Claim 2, 3, 32, 33, 44, 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck et al. (US 6,356,558) in view of Duckwall (US 5,495,481) as applied to claims 1/31/43 above, and further in view of Duckwall (US 5,802,057).

For claim 2, Hauck and Duckwall discloses the claimed invention as described above. Furthemore, for claim 2, 32, 44 Hauck discloses packet of the second type (see col 5 line 20-35 "asynchronous packets" ; col 5 line 25-35 "concatenated packet to be acknowledged")

Furthemore, for claim 3, Duckwall discloses the bogus ack packet (see col 6 lines 20-50 "According to the P1394 standard, acknowledge packets are eight bit long…data packets are at least sixty-four bits long...count the number of bits...discriminate between data packets and acknowledge packets…equal to eight, the node identifies that an acknowledge packet has been transmitted…").

Furthemore, for claim 33, 45 Duckwall discloses the false acknowledgement packet (see col 6 lines 20-50 "According to the P1394 standard, acknowledge packets are eight bit long…data packets are at least sixty-four bits long...count the number of bits...discriminate between data packets and acknowledge packets…equal to eight, the node identifies that an acknowledge packet has been transmitted…").

Hauck and Duckwall are silent about:

For claim 2,3, 32, 33, wherein concatenating the packet is performed by link hardware.

For claim 44. and 45 comprising link hardware adapted to concatenate the packet .

Duckwall from the same or similar field of endeavor discloses a communication network with the following features:

For claim 2,3, 32,33, Duckwall disloses wherein concatenating the packet (see col 8 lines 30-37 "ack-concatenation") is performed by link hardware (see col 8 lines 30-37 "link hardware").

For claim 44 and 45, Duckwall disloses comprising link hardware see col 8 lines 30-37 "link hardware") adapted to concatenate the packet (see col 8 lines 30-37 "ack-concatenation").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the system of Hauck Duckwall by using the above features, as taught by Duckwall, in order to minimize arbitration delays (see col 3).

4. Claim 4,5, 19, 34, 35, 39, 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck et al. (US 6,356,558) in view of Duckwall (US 5,495,481) as applied to claim 1/18/31 above, and further in view of Duckwall (US 2004/0246959).

For claim 4 and 5, Hauck and Duckwall disclose the claimed invention as described above.

Furthemore, for claim 4, 19 Duckwall discloses the bogus ack packet (see col 6 lines 20-50 "According to the P1394 standard, acknowledge packets are eight bit long…data packets are at least sixty-four bits long...count the number of bits...discriminate between data packets and acknowledge packets…equal to eight, the node identifies that an acknowledge packet has been transmitted…").

Furthemore, for claim 34, 46, Duckwall discloses the false acknowledgement packet (see col 6 lines 20-50 "According to the P1394 standard, acknowledge packets are eight bit long…data packets are at least sixty-four bits long...count the number of bits...discriminate between data packets and acknowledge packets…equal to eight, the node identifies that an acknowledge packet has been transmitted…").

Furthemore, for claim 39, Duckwall discloses the false response packet (see col 6 lines 20-50 "According to the P1394 standard, acknowledge packets are eight bit long…data

packets are at least sixty-four bits long...count the number of bits...discriminate between data packets and acknowledge packets…equal to eight, the node identifies that an acknowledge packet has been transmitted…").

Hauck and Duckwall are silent about:

For claim 4, 19, 34, 39, 46 wherein concatenating the packet is performed by PHY hardware.

For claim 5, 35 wherein link hardware is unaware that the PHY hardware performs concatenation.

Duckwall from the same or similar field of endeavor discloses a communication network with the following features:

For claim 4, 19, 34, 39, 46 Duckwall discloses wherein concatenating the packet is performed by PHY hardware (see section 0074 "concatenation in the phy").

For claim 5, 35, Duckwall dicloses wherein link hardware is unaware (see section 0066 "is hidden from the link layer") that the PHY hardware performs concatenation (see section 0074 "concatenation in the phy").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the system of Hauck and Duckwall by using the above recited features, as taught by Duckwall, in order to minimize arbitration delays (see sections 0013-0016)

5. Claim 6, 7, 21, 22, 36, 37, 41, 42, 47, 48 rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck et al. (US 6,356,558) in view of Duckwall (US 5,495,481) as applied to claims 1/18/31/38/73 above, and further in view of Kobayashi et al (US 2003/0179719)

For claims 6, 7, 21, 22, 36, 37, 41, 42, 47, 48 Hauck and Duckwall disclose the claimed invention as described above.

Huack and Duckwall are silent about:

For claim 6, 21, 36, 41, 47 inspecting a first quadlet of a packet to determine a packet type.

For claim 7, 22, 37, 42, 48 the first quadlet contains a transaction code, further comprising: determining from the.transaction code that the packet is a stream packet; and determining that transmission is not occurring during an isochronous period .

Kobayashi from the same or similar field of endeavor discloses a communication network with the following features:

For claim 6, 21, 36 , 41, 47 Kobayashi inspecting a first quadlet (see Figure 17 "tcode", tcode is in the first quadlet) of a packet to determine a packet type (see section 0264).

For claim 7, 22, 37, 42, 48 Kobayashi wherein the first quadlet contains a transaction code (see Figure 17 "tcode", tcode is in the first quadlet), further comprising: determining from the.transaction code that the packet is a stream packet (see section 0264); and determining that transmission is not occurring during an isochronous period (see section 0264, it is determined transmission is in an asynchronous period, which means it is not in a isochronous period).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the system of Huack and Duckwall by using the features, as taught by Kobayashi, in order to provide full compliance with the IEEE 1394 is met and a method for allowing to easily detect the transfer rate available between two or more electronic devices without requiring complex analysis (see Kobayashi section 0010-18).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Duckwall et al. (US 6,904,044 B2)

b. Duckwall (US 6,266,334 B1)

c. Reames, Stephen P. (4,680,755 A)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenan Cehic whose telephone number is (571) 270-3120. The examiner can normally be reached on Monday through Friday 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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